

Claims

[1] A sulfite composition having a sulfite concentration of more than 6.2 M.

[2] The sulfite composition according to Claim 1 having a sulfite concentration of more than 6.2 M and 10 M or less.

[3] The sulfite composition according to Claim 1 having a pH of 5.0 to 5.6.

[4] The sulfite composition according to Claim 1 comprising 2 types or more of sulfites.

[5] The sulfite composition according to Claim 1 comprising 2 types or more of sulfites selected from the group consisting of ammonium salts and sodium salts of sulfites.

[6] The sulfite composition according to Claim 1 comprising ammonium sulfite, ammonium bisulfite and sodium bisulfite.

[7] A method for deaminating DNA comprising the following steps of:

(1) treating a sample containing a single-stranded DNA with a sulfite composition having a sulfite concentration of more than 6.2 M; and

(2) treating the sample treated in (1) with an alkali.

[8] The method for deaminating DNA according to Claim 7 comprising the following step (0) before the step (1):

(0) denaturing a double-stranded DNA in the sample into single-stranded DNAs.

[9] The method for deaminating DNA according to Claim 7, wherein the DNA in the step (1) is DNA comprises cytosine.

[10] The method for deaminating DNA according to Claim 7, wherein the sulfite composition in the step (1) is a sulfite composition having a sulfite concentration of more than 6.2 M and 10 M or less.

[11] The method for deaminating DNA according to Claim 7, wherein the step (1) is a step of performing the treatment in a pH range of about 5 to 5.6.

[12] The method for deaminating DNA according to Claim 7, wherein the step (1) is a step of performing the treatment at a temperature of about 60 to 95°C for about 5 to 60 minutes.

[13] A method for detecting methylated DNA comprising the following steps of:

(a) performing deamination treatment by treating a sample containing a single-stranded DNA with a sulfite composition having a sulfite concentration of more than 6.2 M and treating it with an alkali; and

(b) detecting methylated DNA in the sample obtained in (a).

[14] The method for detecting methylated DNA according to Claim 13, wherein the DNA in the step (a) is DNA comprises cytosine, and the step (b) is a step of detecting methylated cytosine in the sample obtained in (a).

[15] The method for detecting methylated DNA according to

Claim 14, wherein the step (b) is a step of detecting methylated cytosine in the sample by using any of nucleotide sequence determination, a DNA chip and a restriction enzyme.

[16] The method for detecting methylated DNA according to Claim 14, wherein the step (b) is a step of detecting methylated cytosine by means of amplifying DNA in the sample using at least one primer that can amplify a nucleic acid in the case where cytosine of DNA is converted to uracil and at least one primer that can amplify a nucleic acid in the case where cytosine is not converted to uracil, and identifying the locations of 5-methylcytosine and uracil based on the presence or absence of amplification.

[17] A kit for deaminating DNA comprising a sulfite composition according to Claim 1.

[18] A kit for detecting methylated DNA comprising a sulfite composition according to Claim 1.